A Computer-Aided Justice Management System: A prototype for Universities in Uganda

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Abstract— *Justice Management in any organisation is recipe for proper management and organisational prosperity. As error is to human, disputes are inevitable but should be resolved amicably. With a focus on higher institutions of learning justice administration and management is handy in managing competition and so profit maximization especially in the current privatization of higher education. The study aimed at designing a prototype for universities which ultimately helps local citizens to interpret law. Six universities were purposively selected and a cross sectional and design science research methodology employed. The study found that if improved the proposed justice management system would significantly reduce the prevailing challenges of case backlog, losses and postponed hearing records, timely and responsiveness of summons among others. However, in future the small messaging system (SMS) enabled systems could also be considered together with translator into major local languages.*

Keywords— *Justice, Dispute, Rights, Electronic.*

I.   INTRODUCTION

Justice and law are concepts that date way back in ancient times; even when Jesus was on planet earth he was presented before law custodians for trial: Herod, Pilate and others. It was later extrapolated during the colonial era to resolve disputes that emerged during demarcation of territories among the British, French and German in Africa (the 1871 Berlin Conference). The practice of law and justice spread sporadically to other forms of life such as families, companies and educational institutions were not spared (McPherson, 2010; Aseem & Mary, 2012).

The proponents of behaviorism such as Mary Packard Follet and Elton Mayo fore saw the flaws the scientific movement suffered then propounded and promoted humanistic thinking. They alluded that human beings need not be considered for the pay tandem with their output but there may be other unavoidable circumstances that would otherwise impede quality output of workers. In the same vain employers used to exploit employees to maximize their profits (McPherson, 2010). With rising intuitive judgments and increased awareness of peoples' rights and privileges, law and justice steadily perforated into society.

The justice management systems traced above started with informal type where judgments was delivered based on ones' own interpretation of the then laws. However, with the introduction of formal learning law was sanctioned as a profession that needed attention and criteria to join it. Till the recent past courts of law have largely depended on paper based records management citing ease to use and relatively reliable compared to their counterpart IT Enabled (Jay, 2016; Michele, 2015; Antoinette, 2009). Despite these, the case attrition and prevalence have remained the biggest challenges. Cases of lost and misplaced files; absence of presiding judicial officers; prolonged judgments; repudiated/denied summons; other circumstances beyond human control have escalated case backlog in most courts of law in Uganda.

Until a decade ago, court cases used to be known for theft, rape and defilement, treason but recently those of corruption and student-institution related disputes have joined the mantle. In olden days, university education was highly respected and smoothly ran. However with the privatization policy of education in Uganda, many universities and tertiary institutions have opened and law programs offered. This has perhaps raised the awareness of many students regarding their rights and privileges which was not the case before. Besides, the growing globalization culture, students get exposed to many unbecoming practices such as cheating examinations, forging academic papers, and impersonation and hacking into confidential institutional repositories.

Various universities in Uganda admit students under certain terms and privileges alongside the requirements given by National Council for Higher Education (NCHE). While some of the privileges have not been forth coming, others are often misused. More so, some terms and conditions are taken for granted to the effect that every student must be aware. On the

other hand, some university staff, especially young entrants error somewhere. Either way a dispute may spark up. More perplexing still, some universities tend to favor students more than their lecturers because students bring money to university treasuries and vice versa. This clearly leaves traces of doubt when justice is due in case a dispute arises. Such scenarios tend to arouse a desire to try computer-aided systems since they rarely lie, and have relatively low error prevalence. Instead of one waiting to be bounced at the next trial, the computer aided judgment can help him prepare a petition or bail in time. Therefore, this article presents a prototype of a justice management system for universities in Uganda. Specifically, the study examined the current justice management system in universities: to collect requirements and then design a prototype to that effect (Kamlesh, 2013; McPherson, 2010).

This prototype would help in saving on a number of dimensions. While a student/concerned citizen can check to see certain crimes with their pertinent penalties, the judicial officials can post their verdicts timely even when they are absent for a planned hearing; hence saving on time and reducing backlog of cases in their jurisdiction.

II.   LITERATURE REVIEW

Informational freedom is the general right of access to legal information, that is, information about law and norms for example entering into a contractual relationship or modifying an already existing relationship. The principle of access to legal information is among the foundations of the rule of law (Michele, 2015). United Nations (UN) declared internet Access a basic Human Right. This comes in the midst of political uprisings in the Middle East and North Africa, where we saw governments block Internet access of their countries. According to the report "The Special Rapporteur underscores the unique and transformative nature of the Internet not only to enable individuals to exercise their right to freedom of opinion and expression, but also a range of other human rights, and to promote the progress of society as a whole." No one can deny the tremendous impact ICT's are having in exposing the gross atrocities and lack of civil liberties in the hands of dictatorships and role they have played in the toppling autocratic regimes (Antoinette, 2009).

Information and Communication Technologies (ICT) has influenced all the field of knowledge especially in education and social transformation. Because ICTs provide both students and teachers with more opportunities in adapting learning and teaching to individual needs. ICTs have revolutionized the way people work today and are now transforming education systems. Legal education cannot exist in the vacuum; therefore development in legal education is necessary in accordance with new means of ICTs. This scores the importance of Information and Communication Technologies in disseminating legal information (McPherson, 2010). Effective use of ICTs into teaching-learning process has the potential to engage the students. Various applications of ICTs such as audio-video aid to present practical legal problems can motivate and challenge students and thus enhance their analytical and problem solving skills. But for effective use of ICT in education, there is a need to change the attitude of teachers and students (Fissetis, 2011)

The common ground upon which information and communication technologies (ICTs) and human rights can be analyzed was forged two years ago at the United Nations Millennium Summit, which resulted in a declaration that affirmed common global commitments to the protection of the vulnerable, the alleviation of poverty, and the rectification of corrupt structures and processes – particularly in those countries in which there is a dearth of 'rule of law'. The world's leaders resolved to 'spare no effort to promote democracy and strengthen the rule of law, as well as respect for all internationally recognized human rights and fundamental freedoms, including the right to development (Manikya, 2013).

ICTs support the human rights practice of the prevention of violations in a variety of ways by protection of human rights and the deterrence of violations and conflict prevention initiatives designed to detect and defuse imminent human rights violations and conflict. Attention to the protection of human rights through the use of new communication technologies is an area of growing interest, not only from the point of view of the technology and communications sectors, but from the vantage point of those working toward the betterment of governance mechanisms and the continued development of an equitable global civil society. This includes those who work at the community 'grassroots' level, as they form networks of collaboration that extend the span of their missions to the international stage, as well as major public/private sector and governmental entities (Kamlesh,2013).

Human rights organizations are harnessing ICTs in their advocacy and promotion practices to benefit from particular affordances for communication and analysis. These comprise the abilities to communicate quickly, directly, publicly, and interactively with targets as well as to analyze the performance of messages and the nature and segmentation of audiences. Such affordances are not exclusive to ICTs, as pre-existing communication channels allowed them as well, and human rights organizations tend to deploy digital and traditional communication tactics together. ICTs can be harnessed to protect human

rights, to prevent violations and communication-based conflict prevention. That being said, the use of ICTs also creates new security and can violate the right to privacy. In terms of fact-finding, ICTs afford the spontaneous and solicited participation of civilian witnesses in the production of human rights evidence. Of course, a greater volume and variety of information from unknown and untrained sources creates problems of misinformation and verification, which technology only goes so far to mitigate. In terms of advocacy, ICTs provide new channels for quickly and visibly mobilizing publics, for directly engaging with advocacy targets, and for spreading awareness of human rights (Jonathan, 2010).

ICTs can enable a greater variety and volume of voices in human rights advocacy, in part because of the ease with which digitally-endowed and digitally-literate publics can show their support for particular causes. The promotion of human rights using ICTs may indeed contribute to a culture of awareness, but if promotion resources for these initiatives are diverted away from more traditional channels, this is to the detriment of vulnerable groups who are not online (Jay, 2016)

III. DESIGN

This study employed a cross sectional survey design with design science research methodology. There were six universities: three of which have persistently appeared in the press for accusations in courts of law and three which hardly appeared for any accusations in the last five years. This choice informed our requirements analysis as to how justice is managed in the latter and what could have gone wrong in the former. Selected law students and administrators were involved as our respondents (interviewees) for their wide exposure on law matters. A prototype was then designed and tried at Kampala International University and a feedback given from the same respondents.
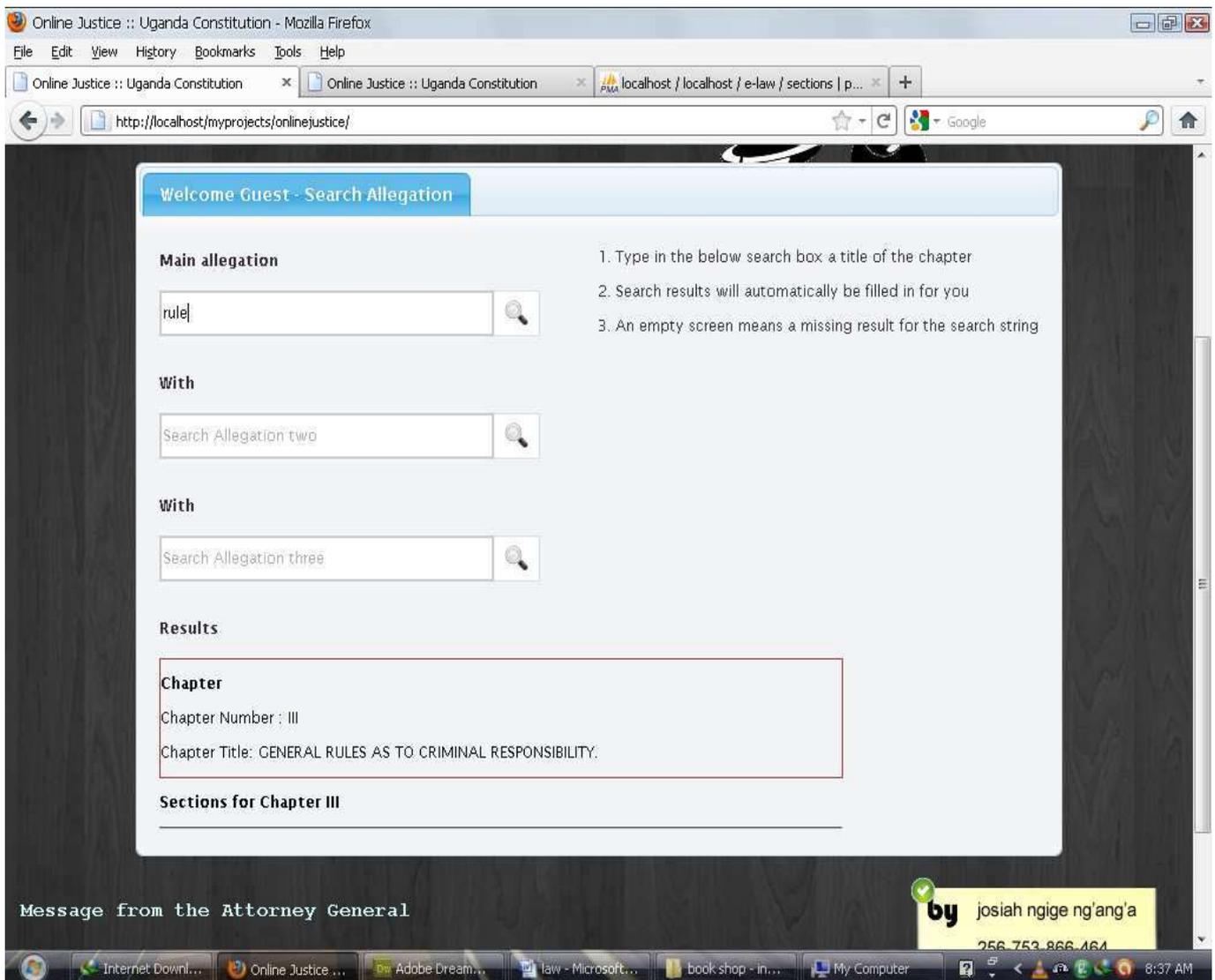

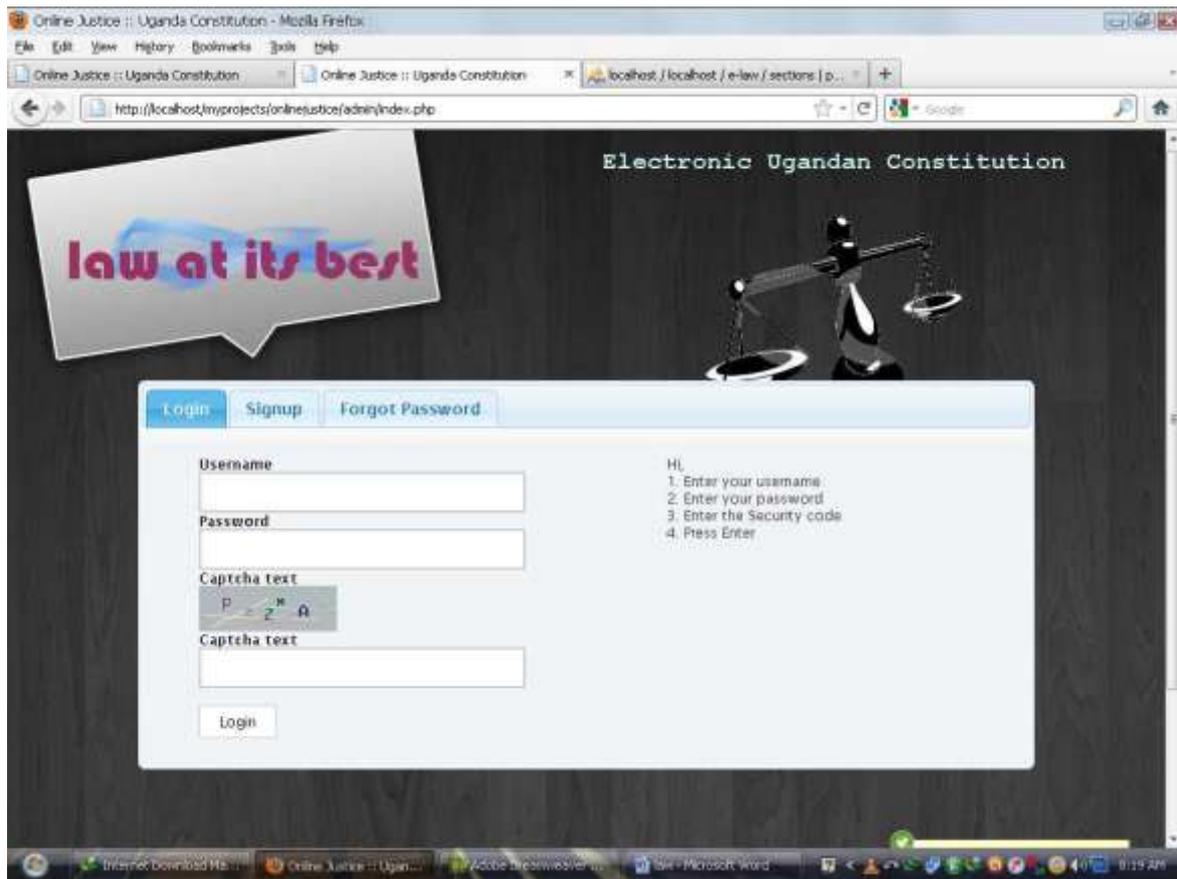**FIGURE 1: Pop up of the laws and their corresponding penalties**

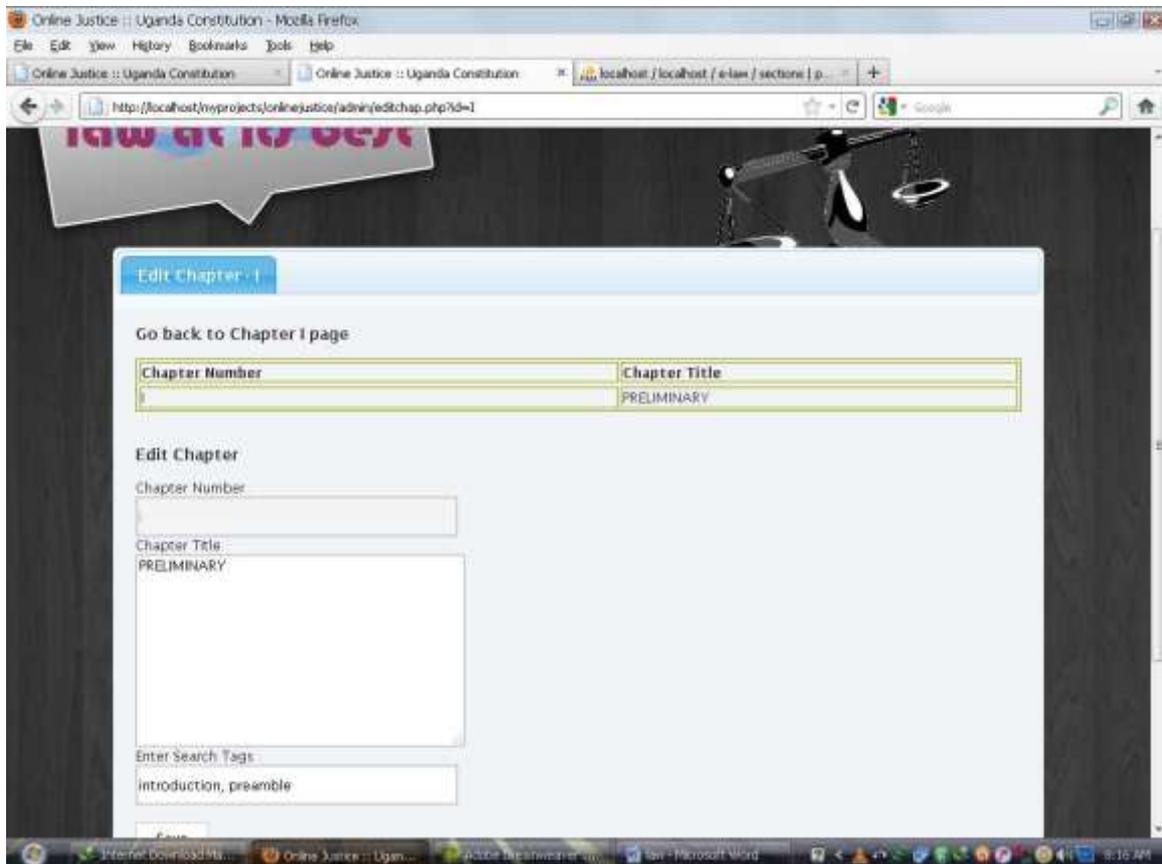**FIGURE 2: Admin interface for signing in, creating users and recovering passwords**
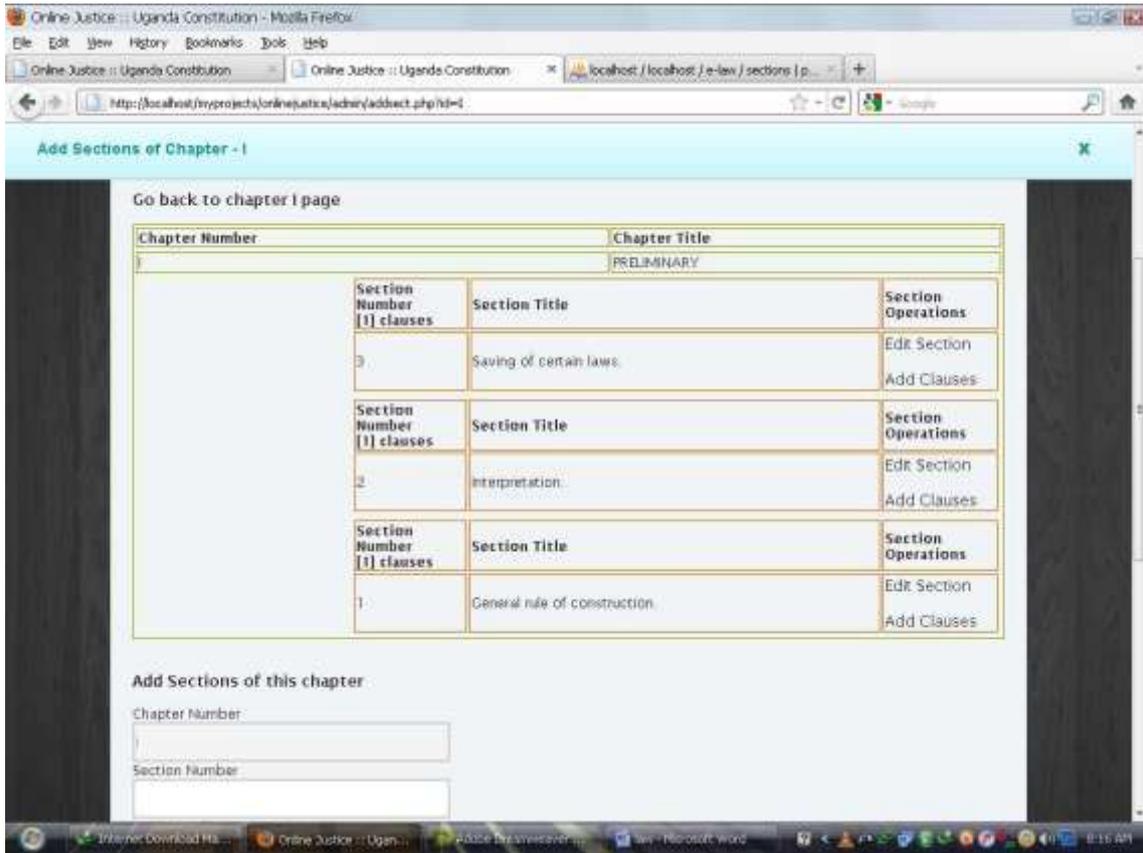

FIGURE 3: Admin interface for editing chapters

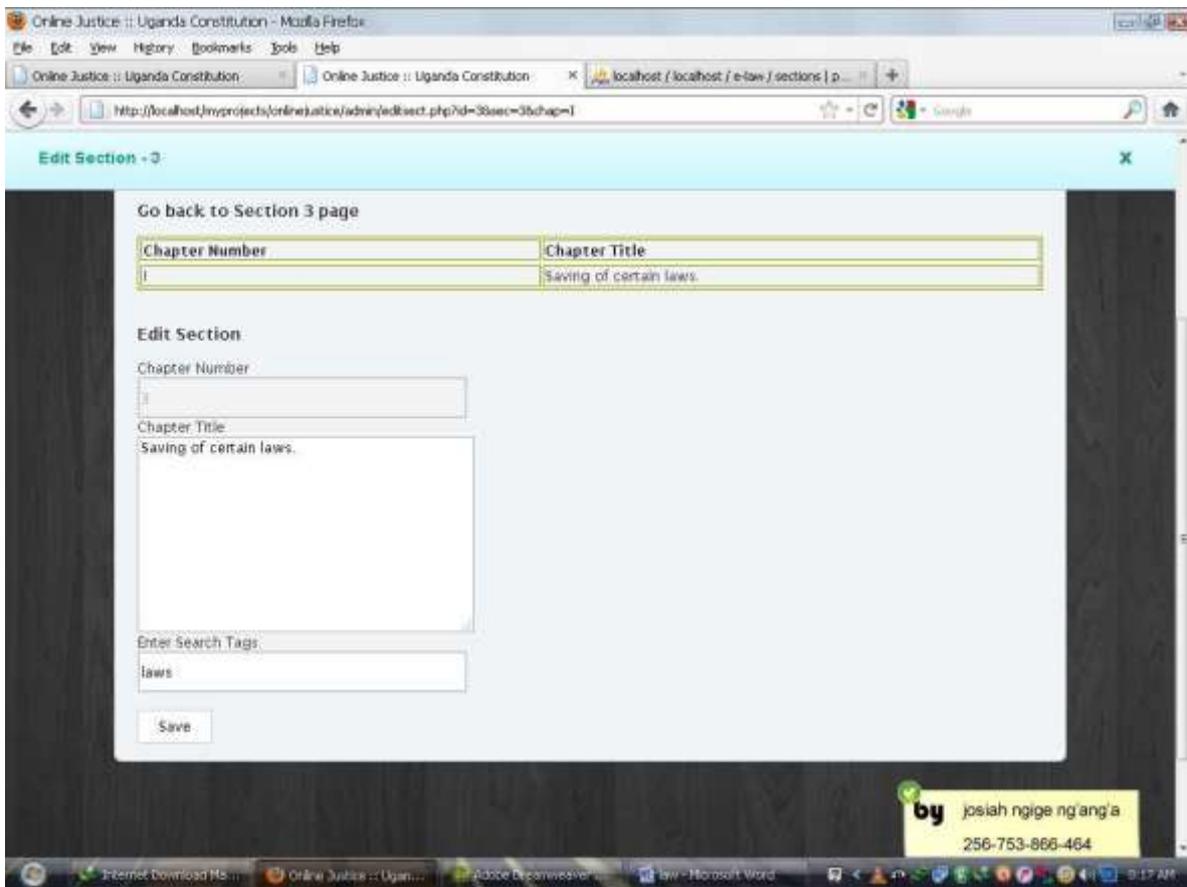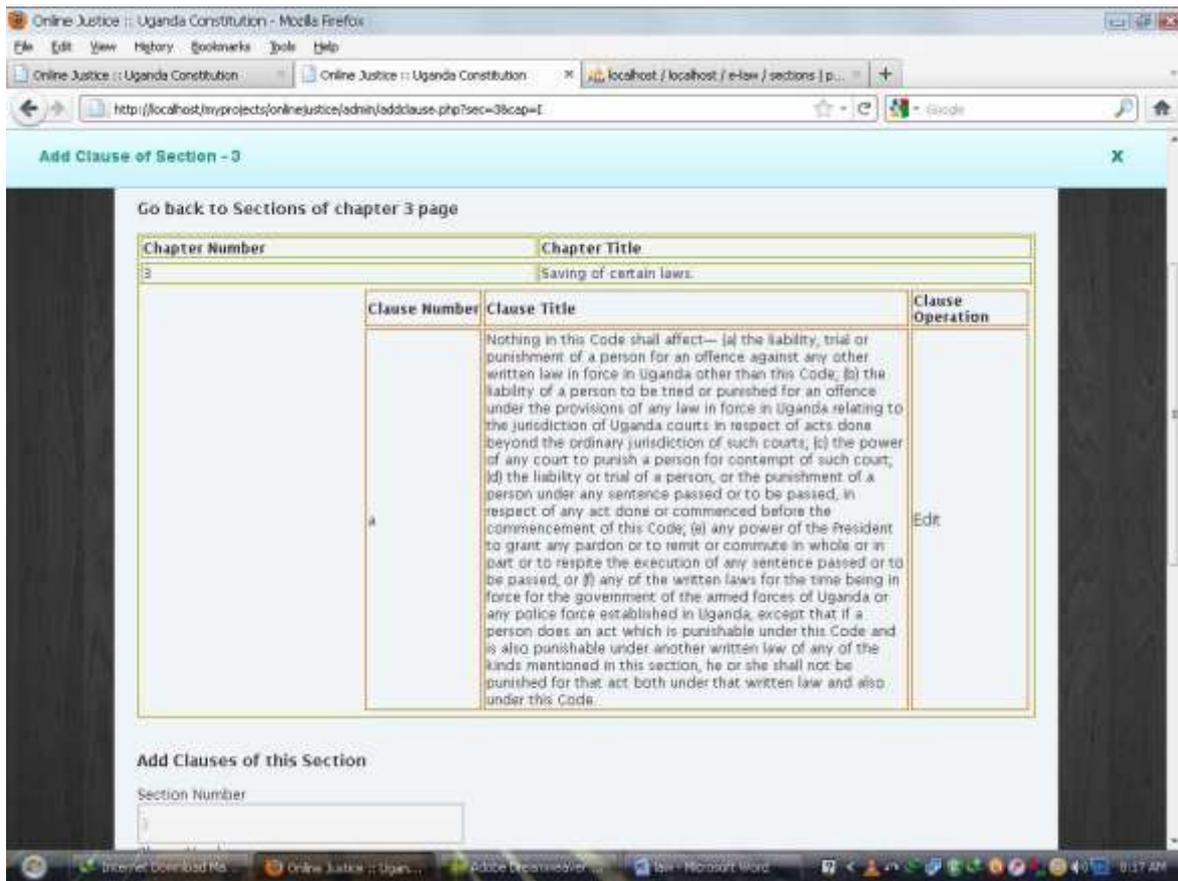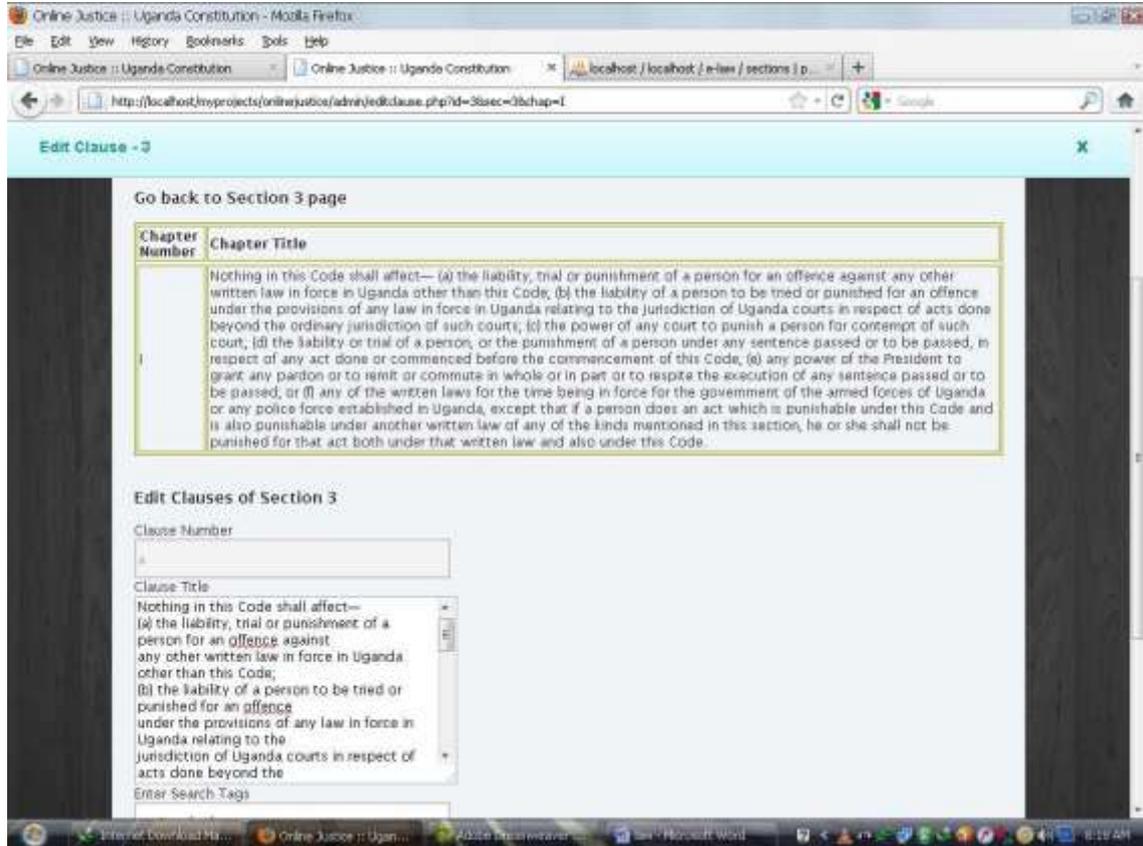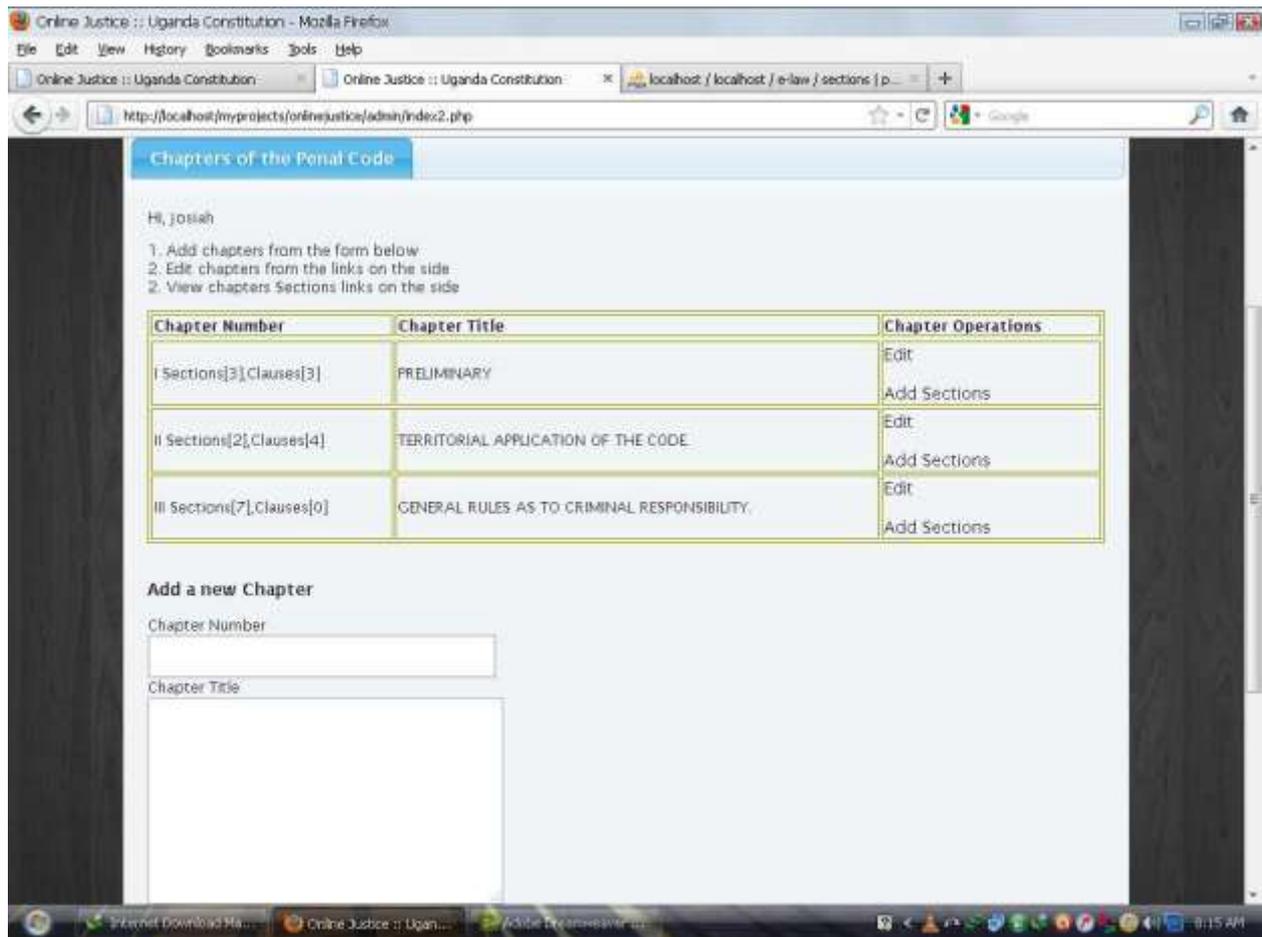**FIGURE 4: Admin interface for adding sections to chapters**

FIGURE 5: Editing a section

FIGURE 6: Admin interface for viewing and adding clauses that fall under a certain section

FIGURE 7: Admin interface for editing clauses

FIGURE 8: Viewing chapters and allowing for edit and addition of sections

IV.   FINDINGS AND CONCLUSIONS

The prototype was assessed against the prominent innovation characteristics namely; superiority, usability, communicability and compatibility. The assessors found the innovation scored well above 4.0 (i.e. agree). The prototype periodically notified the registered students the upcoming or updated chapters and sections to enable them be locked out of ignorance of law which is never a defense.

V.   RECOMMENDATIONS AND FUTURE STUDIES

The study recommends that to reduce significantly on the backlog of cases, the citizens ought to be educated on their rights and justice management procedures. It further recommends that universities should invest ample time to orient and provide all necessary MOUs to students to avoid such accusations. There should be a formal acknowledgement and consent to the legal documents provided. The study therefore, proposes that the future research work should consider SMS enabled justice management system to increase on timely response and mobility of the citizens. Additionally, a computer-aided justice management system that can translate into major local languages and simplified English for un educated citizen should be considered.

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